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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,549	03/20/2006	Michael Zimpfer	209593-102438	1488

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HONIGMAN MILLER SCHWARTZ & COHN LLP

38500 WOODWARD AVENUE

SUITE 100

BLOOMFIELD HILLS, MI 48304-5048

EXAMINER

HEPPERLE, STEPHEN M

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

02/20/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,549

Applicant(s)

ZIMPFER ET AL.

Examiner

Stephen M. Hepperle

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date 12/20/05

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-21, 23, and 25-26 are rejected under 35 U.S.C. 102(a) as being anticipated by Shen (2003/0019525). Shen shows a slide valve with a passage intersected by a slide bore, which holds a slide valve. The slide valve has a head 322, sealed by seal 321 and biased by adjustable spring 327 in a vented chamber. In response to downstream pressure, blocking portion 314 substantially blocks the passage. The head is connected to the blocking portion by pin portion 319. Regarding claim 23, the blocking portion is as large as the passage diameter where it meets the slide bore. Regarding claim 26, as flow through the valve increases, it would be expected that pressure in second chamber 313 would decrease by a venturi effect at point 22 (Fig. 1) in the same way that applicant's second chamber might see a pressure reduction at higher flow rates.

Claims 13, 15, 16, 18-20, 22-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Baudet (FR 2397578). Baudet shows a slide valve with a passage 3, 4 intersected by a slide bore, which holds a slide valve. The slide valve has a head in chamber 7. Blocking portion 1 moves in a vented chamber having spring 8. In response to passage pressure, blocking portion 1 can substantially block or unblock the passage. The head is connected to the blocking portion by pin portion 5. Regarding claim 22, the blocking portion is not sealed to the slide bore (as illustrated), and is therefore seen as inherently providing a damping gap. There also appears

to be a damping gap 6 on the head side. Regarding claim 26, as flow through the valve increases, it would be expected that pressure in second chamber 313 would decrease by a venturi effect at point 22 (Fig. 1) in the same way that applicant's second chamber might see a pressure reduction at higher flow rates.

Claims 13-16, 18, 20, 21, 23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lawrence (2,701,704). Lawrence shows a slide valve with a passage intersected by a slide bore, which holds a slide valve 30. The slide valve has a head (left side in Fig. 1), sealed by seal 59 and biased by spring 44 in a vented chamber 46. In response to downstream pressure, the blocking portion (right side of valve 30) substantially blocks the passage. Regarding claim 23, the blocking portion is as large as the passage diameter where it meets the slide bore. Regarding claim 26, as flow through the valve increases, it would be expected that pressure in second chamber 313 would decrease by a venturi effect at point 22 (Fig. 1) in the same way that applicant's second chamber might see a pressure reduction at higher flow rates.

Claims 13-16, 18-23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Clarkson (378,291). Clarkson shows a slide valve with a passage E, F intersected by a slide bore, which holds a slide valve (Fig. 3). The slide valve has a head G sealed by seal B and biased by spring S in a vented chamber. In response to downstream pressure, the blocking portion H substantially blocks the passage. Regarding claim 19, note pin L (Fig. 2). Regarding claim 21, the area h4 is seen as the channel leading to a region above flange 6, seen as the chamber. The gap between flange d and the bore as well as the gap between the stem above the flange and the bore is seen as a damping gap. Regarding claim 23, the blocking portion is as large as the passage diameter where it meets the slide bore. Regarding claim 26, as flow through the valve

increases, it would be expected that pressure in second chamber 313 would decrease by a venturi effect at point 22 (Fig. 1) in the same way that applicant's second chamber might see a pressure reduction at higher flow rates.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Quarve. Quarve shows a pump 10, load 18, and parallel branches in between, each having a valve. Valve 15 has head 1t 34, blocking portion 30, and spring 32 in a slide bore, which intersects passage C, D.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence or Clarkson alone or in view of Canzano. It is notoriously well known to provide an adjustment for spring bias, in order to adapt a valve to different circumstances. Canzano is a similar valve with a bias adjusting screw 46. It would have been obvious to add an adjuster for Lawrence spring 44 or Clarkson spring S to permit adaptation for differing circumstances. Alternatively, it would have been obvious in view of Canzano to do so.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence in view of Baudet. It would have been obvious to replace the central passage 34 of Lawrence with a pin connecting the head and blocking portion because the two arrangements are equivalent, and to provide a greater flow throughput.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Hepperle whose telephone number is 571-272-4913. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Hepperle/
Primary Examiner, Art Unit 3753